

argues that the problems that caused those crashes have already been remedied without substantial design changes. But the crashes may suggest problems with the design. If there are problems, developers may need to increase the already high costs of the plane or reduce its capability.

The Marines Corps argues that the CH-53E does not meet its requirements for the amphibious assault mission for a number of reasons. First, the slower CH-53E is less likely than the V-22 to survive in hostile environments. Second, even if the V-22 is purchased, CH-53Es will be needed to transport heavy items of equipment that the V-22 cannot carry, but Marine Corps doctrine dictates that the first assault wave be delivered by a more survivable aircraft than the CH-53E. Furthermore, Marine Corps personnel suggest that CH-53Es might not be able to build up sufficient forces fast enough to stop enemy troops

who might arrive soon after operations begin. Smaller U.S. forces would increase the likelihood of a U.S. defeat or potentially increase the number of casualties. This problem of building up forces quickly might be at least partially overcome if each CH-53E carried more troops, but the Marine Corps argues that CH-53Es are too unwieldy and vulnerable to carry large troop loads.

Finally, Marine Corps personnel argue that the CH-53E, or indeed any other current helicopter, would be unacceptable because it cannot deploy overseas without substantial assistance and risk. Many current helicopters can make the relatively long trips over water required to deploy in the Pacific, but they must refuel in flight, requiring the assistance of tanker aircraft, and their slower speed increases the chance that pilot fatigue will result in missing a tanker rendezvous or cause other mishaps.

DEF-11 REDUCE AIR FORCE TACTICAL FORCES

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	220	450	470	490	510	2,140
Outlays	160	360	420	460	480	1,880

NOTE: This table includes estimated net savings in the federal budget. See Appendix A for estimated savings in the Department of Defense budget.

The military forces proposed by the Administration include 20 tactical air wings--13 active and seven in the part-time reserves--six fewer than the Bush Administration planned to have. (Traditionally, an Air Force tactical air wing has consisted of 72 combat aircraft, plus about 28 aircraft for training and maintenance, though the service may be revising this concept.) Substantial disagreement exists about whether all of these forces are needed, since U.S. tactical aircraft enjoy overwhelming superiority compared with the forces of regional powers that appear potentially hostile to the United States. Perhaps for that reason, former Secretary of Defense Les Aspin, when he was the Chairman of the House Committee on Armed Services, recommended in 1992 that the Air Force retain only 18 tactical wings--10 active and eight reserve.

This alternative would follow that recommendation and further reduce the tactical fighter forces in the Air Force to 18 wings by the end of 1996. So rapid a schedule for reductions should be feasible inasmuch as the Air Force has reduced the size of its fleet quickly in the past; for example, it eliminated six wings during 1991 and 1992. Moreover, the six additional wings the Clinton Administration is eliminating will be cut by the end of 1995. Reducing the number of Air Force wings to 18 would cut the service's operating costs by \$220 million in 1996 and by \$2.1 billion through 2000 in comparison with CBO's estimate of the Administration's 1995 plan. (Savings compared with the Administration's 1996 plan would be similar.) Additional savings might accrue from reductions in the procurement of aircraft, but those savings are not included in the table above. (See

DEF-12 for a discussion of changes in procurement of Air Force tactical aircraft.)

In addition to achieving savings, a reduction to 18 Air Force wings could still leave the United States with an acceptable level of military capability in a post-Cold War world. "Balance and Affordability of the Fighter and Attack Aircraft Fleets of the Department of Defense," an April 1992 CBO analysis of several potential adversaries (North Korea, postwar Iraq, and Cuba), found that even after reducing the number of tactical air wings to 26 as proposed by the Bush Administration, the capability of the tactical aircraft in the Air Force exceeded that of the other countries by factors of 22, 24, and 56, respectively. (The analysis was based on a scoring system developed for the Department of Defense.) The large margin of superiority suggests that additional reductions may be feasible without sacrificing the U.S. advantage.

Retaining only 18 wings in the Air Force, however, would not meet the military's current estimate of its requirements. Analysis by the Department of Defense suggests that 20 wings would be the minimum needed to win two nearly simultaneous regional conflicts. Today's U.S. force planning assumes that the United States needs to be able to fight virtually simultaneous wars in two regions of the world--one in the Middle East and another perhaps in Asia. If one accepts that requirement, then the Air Force may well need more than 18 wings.

Some analysts would also argue that additional cuts in Air Force wings ignore a major lesson from

the war with Iraq: aerial bombardment by tactical aircraft can be quite effective and may greatly accelerate the end of a war, thus reducing the loss of lives among U.S. ground troops. A sizable inventory

of tactical aircraft, perhaps more than would be maintained under this option, may therefore be a wise investment.

DEF-12 CANCEL THE AIR FORCE'S F-22 AIRCRAFT PROGRAM

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	2,410	2,560	2,220	3,020	4,280	14,490
Outlays	1,080	1,720	1,640	1,770	2,210	8,420

NOTE: The Administration has made significant changes to its 1995 plan for this program. See Appendix B for estimated savings compared with the Administration's fiscal year 1996 request.

The F-22 aircraft is being developed as the Air Force's next premier fighter and is scheduled to begin replacing the F-15 aircraft around 2000. Fighter aircraft are designed primarily to destroy enemy planes, thus guaranteeing the United States and its allies control of the air. The Air Force wants the F-22 aircraft to have supersonic cruise speed as well as stealth characteristics that make it difficult for enemy sensors to detect. The F-22 aircraft would also be designed to fly long distances and to have highly effective avionics that could make it more capable than other fighters in many types of combat. The F-22 entered full-scale development in 1991, and the first F-22s are to be bought in 1997, according to the Administration's 1995 plan. Changes revealed in the 1996 program suggest that the Administration now plans to defer purchase of the first fighters until 1998.

This option would cancel the F-22 program on the grounds that its additional capability may be both unnecessary and too expensive. Compared with the 1995 plan, canceling the F-22 would save about \$2.4 billion in 1996 and nearly \$14.5 billion for the 1996-2000 period. As a result of deferring the production of fighters, savings from the 1996 plan would be lower at \$2.2 billion in 1996 and \$11.5 billion over the 1996-2000 period. (The total estimated savings include procurement, research and development, and military construction.)

The high cost of the F-22 is one argument for canceling it. The Air Force planned to buy 648 aircraft in January 1993 at a total cost of about \$74 billion in 1995 dollars (\$86.6 billion in current dollars).

The average unit procurement cost of the F-22 would have been about \$84 million in 1995 dollars. Now the Air Force seems likely to buy no more than 442. Total program costs declined by only 19 percent (in 1995 dollars) even though the total quantity fell by nearly a third. The reduction in quantity, and other factors, pushed up the unit procurement cost of the F-22 to about \$91 million (in 1995 dollars), about 8 percent more than the estimate provided in January 1993 and roughly 46 percent more than the average cost of the F-15E.

Since the costs of many weapon systems increase during the full-scale development phase that the F-22 entered in 1991, actual costs could rise even more. For example, the F-22's cost could rise if the Air Force has to fix design flaws. The Air Force argues that the April 1992 crash of the only flying prototype of the F-22 was caused by the way the aircraft was operated and that certain operating restrictions or, at most, minor software changes should prevent future problems, but such mishaps may portend costly production problems. Some recent press reports also suggest that the F-22 may be experiencing other development problems, such as increases in weight, that can raise its costs. And unit costs will rise if F-22 procurement is reduced even further below planned levels.

Events in the Persian Gulf suggest that current Air Force aircraft are able to counter any threat less severe than that formerly posed by the Soviet Union, which many analysts consider to have been the only hostile country whose air force had the capability to threaten U.S. fighters. In view of that reduced threat,

the F-22 may provide more capability to attack enemy fighters than the United States needs.

Moreover, other types of aircraft may prove to be more useful in future conflicts. The extensive use of tactical bombing in the Persian Gulf War emphasizes the value of aircraft that can attack land targets, perhaps in preference to aircraft such as the F-22, which is designed to combat enemy fighters. Given the changes in the nature of the threat, strategies other than buying expensive F-22 aircraft might better meet the Air Force's future needs. Such strategies might include upgrading existing aircraft or developing a new plane that is less capable but cheaper than the F-22.

Nor does the Air Force need to buy the F-22 any time soon to support the reduced size of its tactical forces. CBO's analysis suggests that even if the Air Force procured no fighter aircraft after 1993, it would have more than enough fighter aircraft through at least the middle of the next decade. But the Air Force will experience shortages in its overall tactical fighter fleet around the turn of the century.

The Air Force contends that the improved capabilities of the F-22 aircraft would be required even in a world in which U.S. tactical air forces are smaller and the former Soviet threat is much reduced. If the

United States canceled the F-22 program, the capability of its fighters through the first decade of the next century would be similar to that of today's F-15 aircraft, which entered development in the 1960s. By the next decade, regional powers such as Iraq may possess fighter aircraft that are at least the equal of the F-15. Thus, to maintain its edge, the Air Force believes that the United States needs the improved capability the F-22 aircraft offers. The Air Force also raises concerns about escalating threats from the ground that may degrade the survivability of current aircraft. Surface-to-air missiles are cheaper and easier to operate than fighter aircraft and may be more accessible to regional powers. To counter those threats, fighters may need the improved capabilities of the F-22, including stealth and higher speed.

The F-22 may be able to perform the ground attack mission. DoD has recently announced its intention to provide the F-22 with such capabilities--a plan that may be the Administration's response to criticisms that the F-22 is less useful in regional conflicts if it is a pure fighter aircraft. The F-22's capability to attack targets on the ground may be modest, however, according to some press reports. And the F-22's ability as a bomber will undoubtedly be less than that of a plane developed primarily for the bombing mission.

DEF-13 BUY NO MORE THAN 40 C-17s AND BUY COMMERCIAL AIRLIFTERS INSTEAD

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	210	1,660	1,480	2,370	2,380 ^a	8,100
Outlays	10	150	560	1,090	1,570	3,380

NOTE: The Administration has made significant changes to its 1995 plan for this program. See Appendix B for estimated savings compared with the Administration's fiscal year 1996 request.

a. The 1995 plan for strategic airlift did not include any money in 2000 for either C-17 or commercial wide-body aircraft. CBO assumed that the Administration would need roughly \$4.3 billion in 2000 (about the same amount as in 1999) to continue the procurement program.

The C-17 is a four-engine transport aircraft that can carry a cargo payload of at least 110,000 pounds for a distance of 3,200 nautical miles without aerial refueling. It is being produced as the next-generation airlift aircraft to replace the C-141 Starlifter. Because it is designed to land at relatively small airfields with short runways, the C-17 also is expected to play an important role in meeting transport needs within a combat theater and will substitute for other aircraft, such as the C-130, that traditionally perform that role.

The Congress has already authorized 32 C-17 aircraft through 1995. After an intensive review of its airlift options, the Administration announced in December 1993 that it would commit to purchasing a total of only 40 C-17s. The Administration is expected to make a decision in the fall of 1995 as to whether it will purchase additional C-17s, after reviewing how well the initial squadron of planes has been operating. The C-17's producer, McDonnell Douglas, must also demonstrate that it has lowered the aircraft's costs and reduced its manufacturing defects. If the Administration halts the C-17 program at 40 planes, it will probably purchase either new C-5 aircraft or new or used commercial wide-body jets instead. (DoD refers to those alternatives to the C-17 program as nondevelopmental airlift aircraft, or NDAA.)

The 1995 plan supports purchasing a total of 40 C-17s through 1996. The plan also contains a "placeholder" estimate to buy more C-17s, NDAA, or a

combination of C-17s and NDAA's over the period 1996 to 1999. If all of that funding for strategic airlift was used to purchase C-17s and the Administration devoted about the same amount of resources to that program in 2000 as in 1999 (\$4.3 billion), CBO estimates that budget authority would be sufficient to bring the total C-17 inventory to as many as 94 aircraft.

Instead, this option would limit total purchases of the C-17 to 40 aircraft. The option would substitute purchases of 34 wide-body commercial aircraft such as the Boeing 747-400F or the McDonnell Douglas MD-11 freighter. Those purchases would provide the Air Force with roughly the same amount of airlift capability as 54 more C-17s, as measured in millions of ton-miles per day. Compared with the 1995 plan, including CBO's estimate of funding for 2000, buying no more than 40 C-17s and supplementing them with 34 commercial airlifters would save about \$210 million in 1996 and \$8.1 billion over the five-year period. (These estimates use Boeing 747-400F prices.)

The option would minimize purchases of an aircraft that, among other problems, has had difficulty meeting its performance goals. As part of a settlement reached in January 1994, the Department of Defense plans to lower several specifications for the amount of weight the C-17 must be able to carry, the plane's landing distance while carrying its maximum payload, and the amount of heavy equipment it can air-drop. Air Force officials claim that the original

C-17 contract specifications were based on transportation goals set during the Cold War, which are now unnecessary. But some analysts contend the C-17 will have trouble meeting even those lower performance thresholds.

Manufacturing quality has also been of concern. For example, in October 1992, the wing of the C-17 test aircraft buckled under a test load equal to 124 percent of maximum operating weight. Specifications for the C-17 contract require that the aircraft be able to withstand 1.5 times the structural stress it is expected to encounter during a lifetime of normal use. More recent wing tests have been controversial as well: the left wing failed in two areas as it neared or soon after it reached the 150 percent goal.

Costs for the C-17 program have risen dramatically. If one excludes changes in costs caused by updated assumptions about inflation and the number of aircraft to be purchased, cost estimates for the C-17 have increased by about \$16 billion, or 41 percent, from the original plan. In 1993, DoD estimated that the total unit cost for each C-17, excluding costs already incurred, would be about \$260 million (in current dollars) if 120 planes were purchased. That cost is likely to rise significantly if the Air Force buys fewer aircraft.

Critics also contend that the Air Force may not need as much capacity to carry outsize cargo as 120 C-17s would provide. For example, nearly half the total cargo airlifted during the early stages of the Persian Gulf War could be fit on standard pallets (so-called bulk cargo), as was nearly two-thirds of it dur-

ing the peak month of airlift operations (January 1991). Civilian wide-body jets can deliver bulk cargo more efficiently than the C-17. General Ronald Fogleman, former Commander in Chief of the Air Mobility Command and the Air Force's current Chief of Staff, seemed to underscore this point when he testified in April 1994 before the House Committee on Appropriations that, given fiscal constraints, 70 to 80 C-17s might provide sufficient core airlift capability.

Opponents of this option would argue that at a time when the U.S. military is preparing to face diverse regional conflicts on short notice, the Air Force needs more of the versatile C-17 airlifters. Civilian wide-body jets cannot carry outsize cargo such as an M1 tank or an Apache helicopter. Canceling the C-17 program at 40 aircraft therefore might limit the speed with which the United States could carry out some military missions. The C-17 is also designed to be able to survive enemy attacks better than existing military or commercial airlifters; it is expected to be better able to detect and avoid missiles and anti-aircraft artillery.

In addition, commercial planes are ill suited for austere environments and require long runways and special equipment to be loaded or unloaded. Without the C-17, limitations on the availability or capacity of large international airports might restrict the ability of the United States to deploy forces. That issue may be especially important given the Administration's stated goal of being able to deploy enough forces to fight and win two major regional conflicts nearly simultaneously.

DEF-14 RETIRE EXCESS KC-135 TANKERS

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	40	110	190	280	370	990
Outlays	30	90	170	250	340	880

NOTE: This table includes estimated net savings in the federal budget. See Appendix A for estimated savings in the Department of Defense budget.

The U.S. Air Force owns a large fleet of tanker aircraft to refuel transports, fighters, and bombers while they are airborne. Being able to do so is important for tactical air operations and for deployment of forces by air from the United States to other parts of the world. By the end of 1995, U.S. tanker forces will consist of 478 KC-135 aircraft and 52 KC-10 aircraft (both figures reflect primary aircraft authorized--those planes available for operational use, excluding aircraft used for training).

During the past several years, most of the aircraft in the KC-135 fleet have been retrofitted with new CFM-56 engines that increase their fuel-carrying capacity. Over two-thirds of the KC-135 fleet has been or will be modernized with this engine by the end of 1995. The remainder (designated as KC-135E aircraft) have been retrofitted with less efficient engines for the Air Force Reserve and Air National Guard.

This option would retire 100 E-version aircraft--those with the least efficient engine technology and the smallest capacity for fuel delivery--at a rate of 20 planes per year through 2000. That would still leave the military with more than 425 operational tanker aircraft (including KC-10s). Compared with the 1995 plan, this approach could save about \$40 million in 1996 and nearly \$1 billion through 2000. Savings would be the same relative to the Administration's plan for 1996.

Historically, the tanker fleet has played an important role in the nuclear deterrence mission by supporting long-range strategic bombers. Today, however, most of the requirements for aerial refueling are derived from regional threats. The tanker fleet pro-

vides an "air bridge" for deploying conventional forces, thus reducing the amount of time it takes to place U.S. forces in distant theaters and decreasing the degree to which the United States must rely on foreign bases en route. Tankers can be used to refuel airlift aircraft, as was done to support the C-5 aircraft that carried heavy equipment into Somalia. To a limited extent, KC-135s can also transport cargo during peacetime. Once in theater, tanker aircraft support fighters and bombers, increasing their combat range and endurance. For example, about 300 tanker aircraft supported operations in the Persian Gulf War.

This option could provide enough tanker capacity to meet the requirements of future regional contingencies. The combination of planned KC-135 retirements and the changes proposed in this option would amount to a 15 percent reduction in the Air Force's total capacity for fuel delivery by 2000 compared with its current level. Relative to 1990 levels, those reductions in numbers of tankers are commensurate with the Administration's plans to reduce the number of attack and fighter aircraft by about 40 percent.

Retiring the older KC-135E aircraft would also avoid other problems. The KC-135E has a refurbished engine used formerly by Boeing 707 aircraft in commercial service. Although that engine has greater fuel efficiency than the KC-135's original engine, it gives the aircraft less capacity for fuel delivery and slightly higher operating and support costs than aircraft equipped with the more modern CFM-56 engine. In addition, the older engine does not comply with Federal Aviation Administration Stage III noise standards set for 2000. Since tankers

often operate out of airfields used for both military and commercial aircraft, the Air Force would probably have to purchase "hush kits" or put new engines in its E-version planes in the near future.

Retirement of KC-135E tankers, however, might reduce the number of KC-10 aircraft available for airlift tasks. In addition to being an aerial refueling aircraft, the KC-10 can be used as an airlifter; it is especially efficient at delivering bulk cargo. The Air Force plans to dedicate just 15 of its 52 KC-10s to air refueling missions, leaving the remainder free primarily for cargo delivery. Thus, by retiring more of the Air Force's aircraft dedicated to refueling, this option may reduce the number of KC-10s that can be devoted to airlift missions.

Moreover, the Air Force may need to rely on aerial refueling more heavily if the United States loses access to foreign bases that support airlift missions en route. During the Gulf War, three bases (Zaragoza, Torrejon, and Rhein-Main) handled 61 percent of the airlift traffic. Of those bases, one is no longer available, and it is uncertain whether the United States will have the same degree of access to the others in the future. Opponents of this option might ar-

gue that a large tanker fleet makes the United States less dependent on obtaining overflight and landing rights.

This option might leave the United States unable to wage a conventional war and a major nuclear war involving strategic bombers at the same time. However, in light of the low probability of major nuclear war and the availability of other platforms for delivering nuclear weapons that do not depend on tankers, the loss of capability is unlikely to be a problem.

Perhaps more important, this option might also limit the United States' ability to achieve the Administration's stated goal of being able to prosecute two major regional conflicts that occur nearly simultaneously. In the Persian Gulf War, the military deployed 46 KC-10 and 262 KC-135 tankers. The refueling aircraft retained under this option would be sufficient for a future deployment of similar size and would also provide capability for a simultaneous, smaller conventional deployment in some other theater or for support of a small nuclear mission that involved bombers. But such a force might not permit the United States to fight two simultaneous wars on the scale of Operation Desert Storm.

DEF-15 MAKE THE ARMY RESPONSIBLE FOR CLOSE AIR SUPPORT

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	120	310	560	960	1,200	3,150
Outlays	100	260	470	810	1,070	2,710

NOTE: This table includes estimated net savings in the federal budget. See Appendix A for estimated savings in the Department of Defense budget.

Ground forces and air forces have typically operated in the same area and provided each other with mutual support. Forces on the ground have defended air bases from attack from both land forces and enemy aircraft. Conversely, air forces--in missions referred to as close air support and battlefield air interdiction--have attacked from the air targets that are beyond the reach of ground-based weapons. Those roles have become more complex, however, as ground-based weapons--helicopters and artillery in particular--have attained the ability to attack enemy assets at longer ranges. This option would relieve the Air Force of the responsibility for providing air support to the Army. A consequence of adopting this option is that the Army would have to rely on its own assets, such as attack helicopters and artillery, to attack targets beyond the range of direct-fire weapons such as tanks.

Even though the Air Force has had responsibility for providing close air support (CAS) to the Army for the past 50 years, several defense experts have expressed concerns and doubts about the willingness or ability of the Air Force to do so adequately. The CAS mission involves attacking hostile targets that are near friendly forces and requires close coordination with the Army. Although the Air Force has an airplane, the A-10, that is dedicated solely to the CAS mission, the service has periodically attempted to eliminate all of the A-10s from its force structure. The Air Force still has 144 A-10s, but that is far fewer than the 400 it fielded in 1988. Moreover, half of the remaining aircraft are in the reserve components.

The Air Force has traditionally allotted 25 percent of its fighter aircraft specifically to ground attack missions, which include close air support as well as battlefield air interdiction (BAI). Both those missions involve attacking enemy targets on the battlefield, but in contrast to close air support, air interdiction would be directed at targets far removed from friendly forces. As the number of A-10s has declined, the Air Force has assigned increasing numbers of its F-16s to those missions. By the end of 1996, three wings of F-16s, or almost one-third of all of the Air Force's F-16s, could be designated for the CAS and BAI missions. Since the F-16s are multirole aircraft, however, they are not likely to be as well suited to the CAS mission as the A-10, which was designed specifically for it. In addition, the F-16s could be called on to perform other missions of more importance to the Air Force than CAS. All of these factors highlight the concerns Army commanders could have that Air Force aircraft might not be available when the Army needs them to provide air support.

Perhaps in response to these concerns, the Army has developed and fielded its own weapons capable of attacking ground targets beyond the reach of direct-fire weapons. The premier example of such a weapon is the attack helicopter, which can attack armored as well as soft targets and performed ably in Operation Desert Storm. In addition, the Army is developing fire-support weapons with increasingly long ranges and precision-guided munitions capable of attacking some of the targets previously accessible only by aircraft.

With the Army fielding hundreds of attack helicopters and increasingly sophisticated fire-support weapons, it may be possible to relieve the Air Force of the primary responsibility for providing CAS. That change would simplify operations since the Air Force would not have to coordinate its air strikes so closely with the Army in order to avoid attacking friendly troops. Moreover, the Air Force could retire all of its A-10s and reduce the number of types of aircraft in its inventory, thereby realizing some budgetary savings. The Army could use its currently planned level of forces--attack helicopters and artillery--to attack targets that might today be assigned to Air Force aircraft.

This option would yield significant savings if it led to the elimination of all Air Force aircraft assigned to the close air support and battlefield air interdiction missions. Retiring all of the Air Force's A-10s and about one-third of its F-16s would reduce the size of the Air Force by about five wings. Such a reduction in force could save \$120 million in 1996 and nearly \$3.2 billion over the next five years in operating costs compared with the Administration's 1995 plan. (CBO assumes that savings compared with the Administration's 1996 plan would be similar.)

Eliminating one-third of the Air Force's F-16s, however, could limit the Air Force's ability to carry out its other missions. The F-16 is a multirole fighter capable of performing other tasks, such as air-to-air combat, besides providing air support to the Army.

Cutting the F-16 fleet by one-third and the tactical Air Force by 25 percent would represent a major reduction in the Air Force's overall capability.

Shifting primary responsibility for close air support and battlefield air interdiction solely to the Army and eliminating Air Force assets assigned to those missions would also have other drawbacks. Having multiple means of attack is a distinct advantage for a commander because it forces the enemy to defend itself against multiple threats. Thus, if the United States can attack its enemies with fixed-wing aircraft, helicopters, and artillery all at once or in rapid succession, the defender's task becomes that much harder.

Another drawback to eliminating from the Air Force all aircraft designated for the CAS and BAI missions is the loss of the ability to react and deploy quickly that is inherent in aircraft. Aircraft are often the first assets to arrive in theater, since additional time is needed to transport Army equipment, including helicopters, to trouble spots. With fewer aircraft in the Air Force inventory capable of CAS, delays may occur before significant assets arrive in theater to perform that mission. And a major lesson some observers have drawn from Operation Desert Storm is that air power can slow or even stop the advance of enemy ground forces. Sharply reducing the number of U.S. aircraft capable of providing close air support would eliminate many of the aircraft that contributed to an early victory in the Gulf War and helped to keep down the loss of U.S. lives.

DEF-16 FREEZE FUNDING FOR MILITARY SPACE PROGRAMS

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	150	60	600	1,050	1,080	2,940
Outlays	70	70	180	520	830	1,670

The United States conducts activities in space necessary for national security in the post-Cold War era. The Department of Defense's space program consists of launch vehicles, satellites, communications systems, navigation systems, related support facilities, and various space-related projects that provide assured, responsive support to military forces deployed worldwide.

The Administration's 1995 plan for military space programs, including the requests for intelligence activities, averages about \$14 billion for each of the next five years, slightly higher than the \$13.5 billion appropriated by the Congress for those programs in 1995. By comparison, the Congress appropriated about \$14.3 billion for programs of the National Aeronautics and Space Administration in 1995. DoD's request therefore represents about one-half of all funds for federal space programs. Annual spending on military space programs would exceed \$15 billion by 2000 and would total \$72 billion over the next five years. During the past several years, the Congress has been concerned that those programs have lacked direction and become ineffective and costly.

This option would freeze spending for military space programs at the 1995 appropriation level, allowing for increases only to keep up with the rate of inflation. Relative to the 1995 plan, this option could save \$0.2 billion in 1996 and \$2.9 billion over the next five years. Savings would be about the same relative to the Administration's 1996 request because the Administration has not made many changes to the space program.

For the past two years, the House Committee on Appropriations has observed that no clearly defined national space policy exists to guide the investments and processes of military and civilian space programs. In the committee's view, the space program is poorly coordinated, unresponsive to users' needs, inattentive to potential cost savings, and lacking in clearly defined requirements. The committee reaffirmed the need for a single integrated investment strategy to reduce costs and increase efficiencies. Although the committee asked the Secretary of Defense to prepare a plan to meet those objectives, the department had not completed the report by December 1994.

Reorganizing and streamlining defense space activities could result in significant savings by reducing the size of the workforce while improving the central oversight that would promote joint activities and coordination among various defense components. According to the General Accounting Office, for example, DoD could consolidate certain space education and training programs. Consolidating the services' satellite control network could also save money.

The department could also achieve savings by revising current practices governing the acquisition and operation of space systems. For example, placing greater priority on developing smaller satellites would allow the department to move away from more expensive heavy-lift launch vehicles. The department could also establish more reliable launch schedules supported by the use of standardized interfaces and modular designs in new space systems.

Closing space support facilities, including launchpads and range support installations that exceed requirements, could also yield savings.

If not properly managed, however, a freeze in funding for military space programs could risk the loss of important military capabilities needed to support the operations of military forces. Those programs play a critical role in various national security functions including military deployments and training exercises, intelligence reporting, and support during a crisis. Operation Desert Storm used space-based systems, such as the Defense Support Program and the Defense Satellite Communications System,

that played vital roles in the coalition's success. Any reductions in spending for space programs should preserve the ability to provide the support necessary to conduct such critical missions. In particular, imposing proportional reductions on all space programs below current plans could delay some that deserve high priority. Specific proposals for appropriate priorities within constant funding levels should be identified in DoD's revised plans, which may also analyze the advantages and disadvantages of alternative programs, including their impact on the industrial base, their ability to meet requirements, and potential revisions to the military departments' roles and missions.

DEF-17 REDUCE THE NUMBER OF ARMY LIGHT DIVISIONS

Savings from the 1995 Plan	Annual Savings (Millions of dollars)					Cumulative Five-Year Savings
	1996	1997	1998	1999	2000	
Budget Authority	350	1,160	2,130	3,000	3,450	10,090
Outlays	290	1,000	1,890	2,710	3,200	9,090

NOTE: This table includes estimated net savings in the federal budget. See Appendix A for estimated savings in the Department of Defense budget.

The active portion of the U.S. Army consists of 12 divisions, eight of which are generally regarded as "heavy"--that is, equipped with tanks and other armored vehicles. The eight heavy divisions are primarily intended to be used against other armored forces. The other four divisions, referred to as "light" divisions, are useful against less heavily armored forces and were designed to be dispatched quickly and transported easily to trouble spots around the world. They include one airborne division, one air assault division, and two light infantry divisions (LIDs). The Administration plans to eliminate two heavy divisions by the end of 1996.

The utility of the light infantry divisions has been questioned in the Congress and elsewhere since their creation 10 years ago. The Reagan Administration justified the LIDs by emphasizing the need to respond to events anywhere in the world by rapidly dispatching U.S. forces. But recent history indicates that the United States may not need those divisions. Between 1945 and 1991, about 120 incidents--excluding major conflicts such as those in Korea, Vietnam, and Iraq--required commitment of U.S. ground forces. Of those, the Army was involved in about a third and even then, generally not in very large numbers. Indeed, only 12 of those incidents required Army forces of division size or larger. One can argue that other units--including the Army's airborne and air assault forces and three Marine Corps divisions--also provide sufficient rapid response.

Other questions arise about the capability of the LIDs once they have been transported, presumably to a hostile location. With 870 jeeps, 135 motorcycles, and 41 utility helicopters for transportation, a light

infantry division has limited mobility, and most of its 10,000 to 11,000 soldiers would have to move by foot. A LID also has limited firepower, particularly against an enemy with any kind of armored vehicles. Each division has only 44 long-range antiarmor missiles, 62 howitzers, and 29 armed helicopters; the most numerous antiarmor weapon in the LID--162 Dragon medium-range antitank missiles--has a limited capability against modern tanks.

Perhaps the strongest statement about the utility of the LIDs in combat was made by the Department of Defense when it failed to use any light infantry forces during Operation Desert Storm. That conflict was initiated by a relatively unsophisticated foe and occurred halfway around the world with very little warning. The need to establish some military presence in theater very rapidly would seemingly have argued for the use of light infantry forces. Nevertheless, none of the LIDs were deployed. Another telling experience has been that of the 10th Mountain Division in Somalia. That light infantry division's firepower and protection proved to be inadequate against even the unsophisticated and poorly equipped troops of a Somali warlord. As a result, parts of a heavy division were dispatched to Somalia to provide armored protection to U.S. forces there.

Questions could also be raised about the Army's need for both an airborne and an air assault division. The former is designed to be dropped by parachute into hostile territory when no seaport or airport is available for debarkation; the latter is designed to be deployed by helicopter to relatively remote locations, although the deployment must be staged from a protected area. The United States has not conducted a

parachute assault involving an entire division since World War II. Drops including one brigade--about one-third of a division--were carried out in Korea and Vietnam and in Panama in 1990. In Operation Desert Storm, portions of the 82nd Airborne were sent to the Middle East early in the operation, but they did not parachute in and, once reinforced by later-arriving heavy combat units, were assigned supporting roles and were not involved in any major battles. Additional paratroop-qualified units exist in the special-forces branch of the Army, and it is not obvious that the Army needs an entire division designed to be dropped by parachute.

This alternative would eliminate the equivalent of two of the remaining light divisions from the Army's active forces. Forces disbanded would include one of the remaining light infantry divisions and portions of the airborne and air assault divisions. To permit an orderly drawdown, the divisions would be eliminated gradually over the five-year period. The alternative would retain one light infantry division and one airborne division consisting of two air

assault brigades and one airborne brigade. Compared with the 1995 plan, this alternative would save \$350 million in 1996 and roughly \$10 billion over the next five years. (CBO assumes that savings compared with the Administration's 1996 plan would be similar.)

Despite these savings and the shortcomings of the light infantry divisions, eliminating more of them would reduce U.S. capability in certain situations. For example, LIDs might be useful during combat in urban areas where armored vehicles could not operate easily. They might also be useful for defending areas such as airports or seaports if the enemy did not have armored capability. Finally, in a recent demonstration of the utility of light divisions, contingents from the 10th Mountain LID were instrumental in operations in Haiti. A proposal to eliminate all but one of the LIDs might also encounter political opposition because it would mean closing at least one military facility that has been activated and refurbished in recent years.